

**Amendments to the Drawings:**

The attached sheets 1-5 of replacement drawings reflected by Figs. 1, 2A, 2B, and 3-7 include changes to Figure 2B, where the reference “A” was changed to an “a” so that it now conforms to the description. Figure 3 has been amended to remove the references “103B” and “122”, as they are not used in the description. In figure 5 the reference “122” has been removed. A new drawing is provided as figure 7 that is a copy of figure 1, but with transition markers shown as described in the specification utilizing unused reference “5” for the transition markers.

**Attachment:** Replacement Sheets.

### ARGUMENTS/REMARKS

Applicants would like to thank the examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

In the specification, two paragraphs have been amended to add missing reference numbers. In the replacement drawings, various changes were provided that include changes to Figure 2B, where the reference “A” was changed to an “a” so that it now conforms to the description. Figure 3 has been amended to remove the references “103B” and “122”, as they are not used in the description. In figure 5, the reference “122” has been removed. A new drawing is provided as Figure 7 that is a copy of figure 1, but with transition markers shown as described in the specification paragraph beginning at line 30 on page 13, utilizing unused reference “5” for the transition markers provided in the figure. The changes to the drawings and specification are deemed to address the Examiner’s objections to the drawings, and thus it is recommended that the rejection be withdrawn.

Claims 35, 38, 40-44, 48-54, 56, 59-61, 63-65, and 69-72 remain in this application. Claims 1-34, 36-37, 39, 45-47, 55, 57-58, 62, and 66-68 have been canceled. Claims 40, 48, 61 and 69 have been withdrawn as the result of a restriction requirement, and applicant retains the right to present those claims in a divisional application. New claims 73-85 are added without adding any new matter.

The examiner objected to claim 50 because of a lack of antecedent basis, but an amendment to the claim has rendered the objection moot. The Examiner is correct that the claim after claim 50 should be read as claim “51” instead of “5”, which has also been corrected by amendment.

Claims 45 and 66 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement for reciting that light sensors emit light that is

substantially “parallel” to the transporting direction. The claims have been canceled, making this rejection moot.

Claims 35-39, 41-42, 50-52, 55-60, 62-63, and 70-71 were rejected under 35 U.S.C. §102(b) as being anticipated by Whitehouse (WO 99/47885). Claims 43-44, 48-47, 49, 64-65, and 67-68 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whitehouse in view of Van Devanter *et al.* (U.S. 4,557,019). Claim 53 was rejected as being unpatentable over Whitehouse in view of Antonissen (US 4,572,044). Claims 54 and 72 were rejected as being unpatentable over Whitehouse. Claims 45 and 66 were rejected as being unpatentable over the combination of Whitehouse, Van Devanter, and Antonissen. For the following reasons, the rejections are respectfully traversed.

Among other things, the amended, independent claims 35 and 56 now require that the items are placed consecutively and substantially abutting each other on the conveying means, that the controlling step includes an item boundary detection step, such that a point of transition between consecutive items on the conveyor means is based on the at least one measured item characteristic, and that the item boundary detection step includes the steps of: receiving successive item data sets from the at least one measured item characteristic; and analyzing the received data for identifying the boundaries between the consecutively abutting items. The Whitehouse reference does not anticipate any of these above-mentioned novel features of claims 35 or 56, including boundary detection of abutting items.

For example, claim 35 recites that the “items are placed consecutively and substantially abutting each other on said conveying means” but also that “the controlling step includes an item boundary detection step, such that a point of transition between consecutive items on the conveyor means is based on the at least one measured item characteristic” and the item boundary detection step includes “analyzing the received data for identifying the boundaries between the consecutively abutting items”. Thus, the boundaries between items that are abutted to each other can still be separately identified.

Whitehouse may disclose detecting the start and end of items that are placed with a space apart, either by the distance transducers used for measuring characteristics of the

items or by movement or proximity sensors placed along the conveyor, (see, for example, page 3, lines 17-21, page 6, lines 4-7, and page 10, lines 23-25, where signals indicating the entry and exit of items are used), but the reference does not disclose any ability to identify the boundaries between abutted items.

The reference teachings cited above can only be interpreted to mean that the items are placed *apart* from each other if they are to be separately detected, because no explanation is given as to how such signals could be established when the items are substantially abutting each other, and in fact, one skilled in the art would understand that by utilizing a proximity sensor on substantially abutting items would only result in a showing of *one* very long item, as such a sensor cannot detect the boundaries of abutting items. Furthermore, Whitehouse does not mention the items being placed abutting each other anywhere in the description or the claims, and thus there is no explanation given as to how such abutting items might be differentiated from each other.

In the drawings of Whitehouse, however, it may initially *appear* that some of the meat pieces are placed close to each other, but any implication or conclusion that the items actually abut each other must be an illusion or erroneous for the reasons discussed below.

For example, in figure 3A, the items are placed apart at the first conveyor 10, then they are somehow apparently located near or even abutting each other at the second conveyor 18, and at the third conveyor 78 the cut portions are spaced apart such that the boundaries between the items have an extra space, making those boundaries obvious. How this can occur if the items were abutted is not explained, and is not possible with the proposed apparatus. The last step is explained in the description, cf. page 11, lines 6-7, by letting conveyor 78 run faster. However, no explanation is made as to how the difference between the placement at the first and second conveyors is achieved. Instead, the only apparent way to obtain the situation in figure 3A would be to have the second conveyor run *slower* than the first conveyor (similar to the opposite effect achieved for the third conveyor). However, in the description it is mentioned that the two conveyors normally have the *same* speed, (see page 11, lines 9-10). Furthermore, the different speeds method would not work for long meat pieces as shown in the drawings since the

meat pieces, due to their characteristics, would not pass the transition between the two conveyors in undisturbed condition. A long meat piece (as shown in the figures) being pushed from a “fast” conveyor to a “slow” conveyor would initially tend to curl or bunch up at the “slow” conveyor and when a certain amount of the meat piece had passed onto the “slow” conveyor, the “slow” conveyor would tend to determine the transport speed due to the friction and the part of the meat piece at the “fast” conveyor would tend to curl up.

In short, the meat pieces could not be placed abutting each other on the second conveyor and still obtain the desired features disclosed by the references. Furthermore, the different speeds method would interfere with the stated objectives, as the fast going “new” piece would bump into the slow moving number of abutting pieces on the second conveyor, but because of its length, still be pushed by the faster first conveyor until it completely passed the gap 20.

Still, it is noted that if such an arrangement was used, i.e. with a “fast” conveyor followed by a “slow” conveyor, the meat pieces would, as explained above, become distorted when passing from one conveyor to the next, and since the scanning of the meat piece is performed there, the measurements from the scanning would give a false impression of the dimensions, shape etc. of the meat piece and would not be suitable as input parameters for the subsequent sectioning of the meat piece into portions, since the shape, dimensions etc. of the meat piece when being sectioned would be different from the shape, dimensions etc. of the meat piece when being scanned. It will thus be understood that such an arrangement would not be feasible and would not operate as required, in contrast to the process of claims 35 and 56. Hence, even though items of the figure each other may *appear* to be close to each other, as disclosed by figure 3A, they *cannot* be abutting each other (which, by the way, is not actually shown and is never described in the specification), because it would be unclear how this feature is obtained and could be reproduced, and because in all cases, Whitehouse remains completely silent about how boundary detection could be carried out with abutting items, it cannot be that the pieces actually abut each other, but that the drawing is instead showing pieces close to each other, but actually separated from each other, as required for the disclosed method to work as disclosed, as discussed above.

In this respect, reference is made to the enclosed prior art article “Cutting meat to order for the supermarkets”, Design Engineering, Morgan-Grampian Ltd. London, GB, November 1999, page 58, which was cited in the International search report and which relates to an automated machine for slicing meat.

This machine is provided by AEW Engineering, a subsidiary of the proprietor of the Whitehouse reference WO 99/47885. In the article a drawing corresponding to fig. 3A of Whitehouse is shown but the meat pieces on the second conveyor are shown clearly placed apart, and not abutted. This further implies that fig. 3A of Whitehouse was sketchy and imprecise with respect to the meat pieces placed on the second conveyor and that a more accurate drawing was used to reflect the actual relationship when the article describing the machine, which is the subject matter of the Whitehouse WO 99/47885, was published. Thus, this is evidence that the figure does not intend to show abutting meat pieces.

It is also submitted that in figure 3B of Whitehouse, which differs from figure 3A only in that the first and second conveyors are drawn as one single conveyor, the items are placed apart at the beginning of the combined conveyor but other items are somehow apparently closer to each other (or abutting as the Examiner argues) a little further along the combined conveyor without any explanation as to how this could occur, supporting a conclusion that an actual abutment is not intended. Figure 3B contains plenty of drawing errors rendering its disclosure very unclear. The gap between the first and second conveyors of figure 3A has disappeared but the reference sign 20 was not removed. The conveyor is still referred to by both reference signs 10 and 18. Further, the combined conveyor still seems to have two servomotors placed at the same locations as the two servomotors in figure 3 (servomotors corresponding to the servomotors denoted by reference signs 28 and 30 on figure 1).

Hence, it appears that the draft person has simply copied figure 3A with all references and merely removed the gap without making consequential corrections to the rest of the drawing. The result is an illustration of an apparatus that is self-contradictory and impossible. The skilled person would not have any indication on how the machine of figure 3B operates. This is further emphasized by the fact that figure 3B is not explained

at all in the description except for the fact that the transducers are not necessary below the conveyor (see page 11, lines 24-26).

Thus, even though it may appear to the Examiner that items are abutting each other in figure 3B, such a feature would *not* be consistent with the rest of the disclosure and it is unclear how this feature would be obtained and could be reproduced, in particular because in all cases, Whitehouse remains completely silent about how boundary detection could be carried out with abutting items. Thus, the only possible conclusion is that the disclosure does not intend its method to operate on abutting meat pieces, and any conclusion that such abutment is shown in the drawing is erroneous and inconsistent with the disclosed method and apparatus.

According to MPEP section 2121 and subsections, a prior art reference is inoperable if it does not enable one skilled in the art to carry out the subject-matter of the reference, and it is clear from the discussion above that the reference, taken in totality, cannot disclose the feature for which it is cited. It is clear that Whitehouse does not disclose items abutting each other in a clear and unambiguous way enabling one skilled in the art to reproduce it; and neither does Whitehouse disclose boundary detection of abutting items. Accordingly, claims 35 and 56 are patentable over the Whitehouse, as are the claims dependent thereon. Van Devanter and Antonissen fail to overcome the problems identified by Whitehouse, and thus the claims are patentable over any combination of the references as well.

In addition, regarding the rejection of claims 54 and 72, the Examiner admits that Whitehouse does not disclose inserting a transition marker between separate items, but instead asserts that such a feature is well known, citing a plastic bar put between orders on a grocery conveyer. Nevertheless, the Examiner fails to provide any evidence as to why one skilled in the art would provide such a feature in the art of the invention. Customer placed dividers at a grocery store is can hardly be considered a relevant art to meat cutting processes, and the proposed dividers are not plastic bars that can be manually placed by purchasers. The examiner Official Notice of the feature of these claims, but applicant formally disputes this assertion. Taking “official notice” requires

that facts outside of the record be capable of *instant* and *unquestionable* demonstration as being ‘well-known’ in the art (see MPEP §2144.03). However, the Examiner has apparently attempted, but failed, to find a reference in the relevant art which teaches the cited elements of the claims. Hence, these elements are not likely to be “notoriously well known” in the pertinent art as required (*id.*), and the Examiner’s example is not in the relevant art. Accordingly, applicant hereby traverses the official notice and formally requests, as required by the MPEP (*id.*), that the Examiner locate a reference in support of his position that a remote control operation of selecting a stored announcement or greeting for playing to a calling party is well-known in the art of radio communication devices, as asserted in the Office action.

Consequently, applicant asserts that the Examiner’s rejection of claims 54 and 72, based on the Official notice that is herein traversed, be withdrawn absent the Examiner finding a reference supporting the notoriously “well known” nature of the claimed feature.

Furthermore, the Examiner has not made a *prima facie* case of obviousness, which requires the Examiner must show that there is some suggestion or motivation to modify the reference (MPEP §2143.01). Merely listing an advantage or benefit of the combination is not sufficient, as some rationale for combining the references must be found in the references themselves, or drawn from a convincing line of reasoning based on established scientific principles practiced by one skilled in the art that some advantage or beneficial result would be produced by the combination (MPEP §2144). Such motivation cannot be found in the application itself, as such hindsight is impermissible; the facts must be gleaned from the prior art. (MPEP §2142, last paragraph).

“To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made [and] the examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person.” (MPEP §2142, emphasis added). It is not

proper to merely combine various elements from various references. The invention must be obvious “as a whole”, not as a piecemeal combination of elements from various references.

Accordingly, the rejection for obviousness is not properly supported by the facts and arguments provided in the Office action and thus the rejection is improper, and should be withdrawn.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. SCAN1-41081.

Respectfully submitted,  
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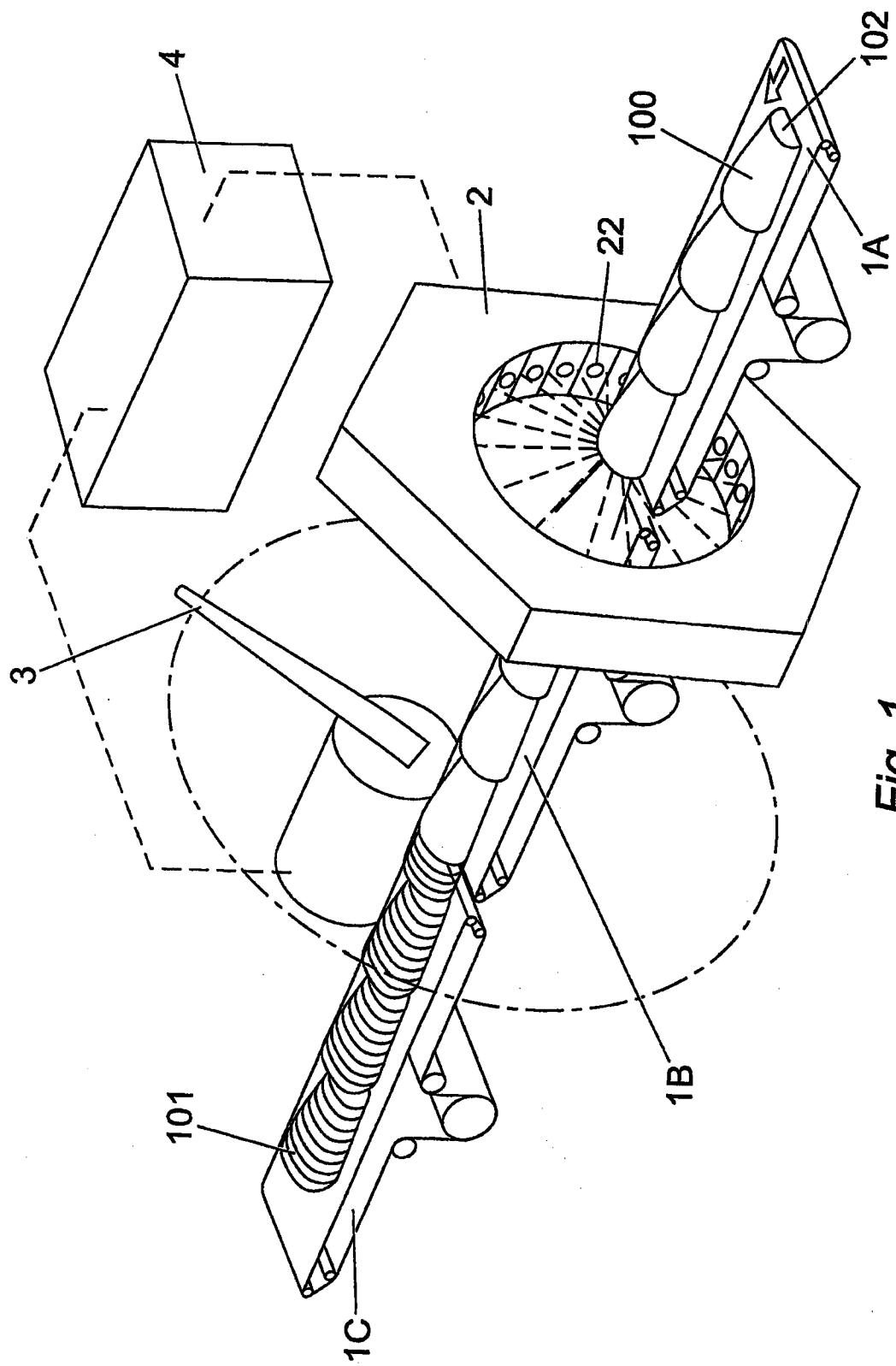


Fig. 1

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Fig. 2A

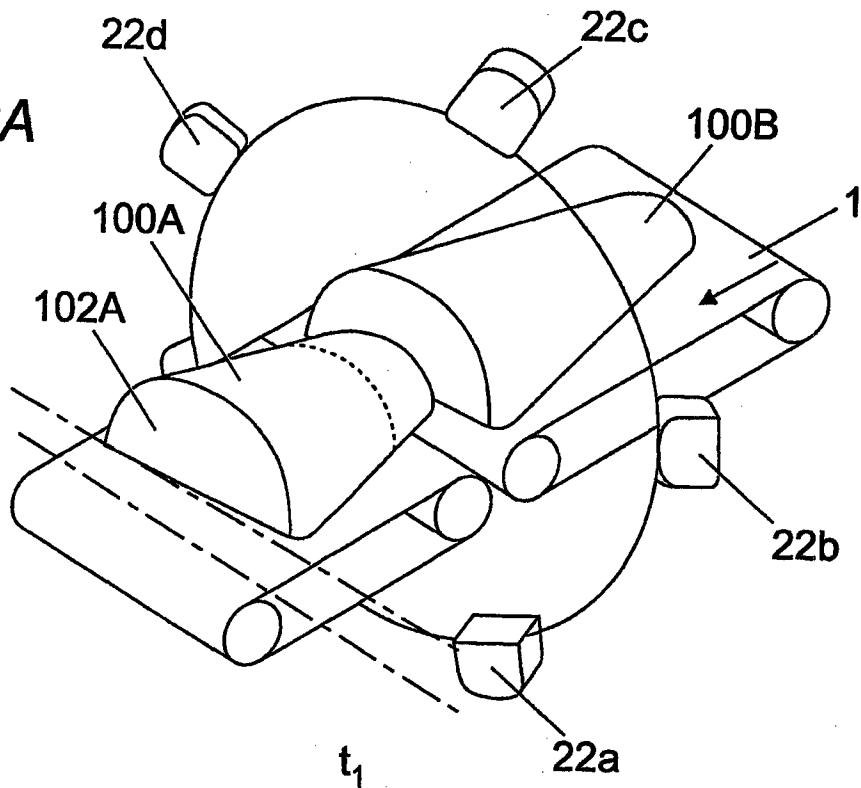
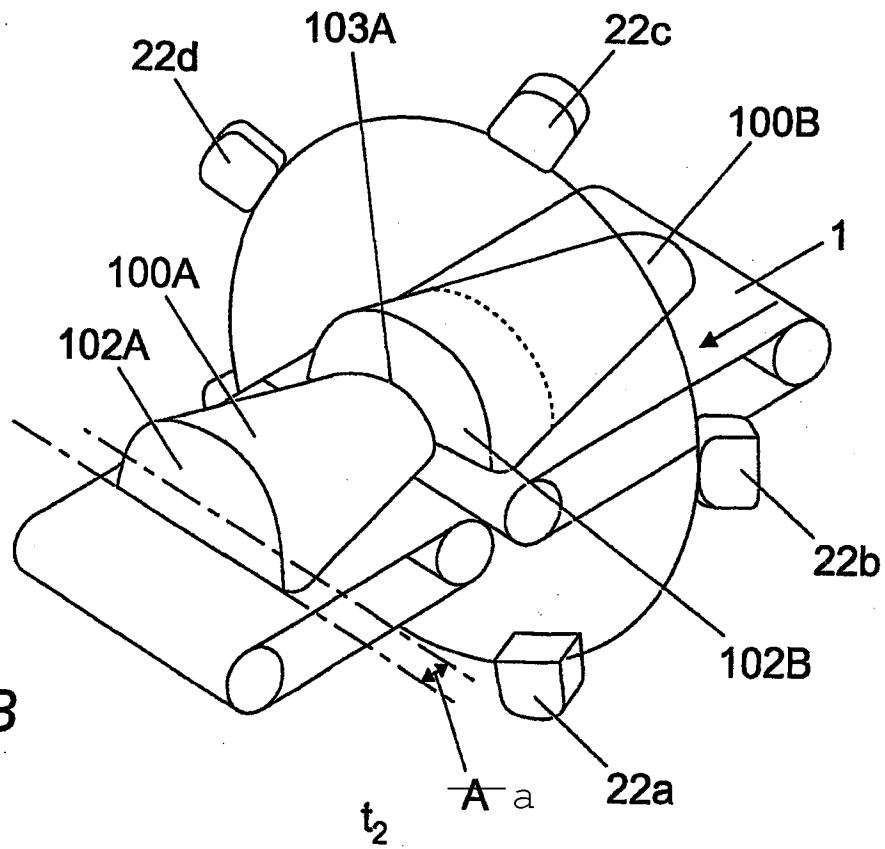


Fig. 2B



Lower Case Letter

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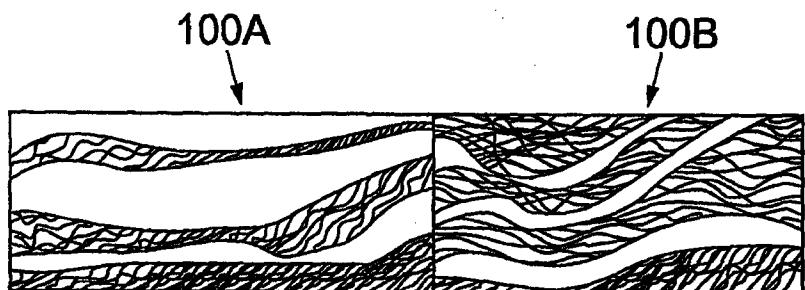
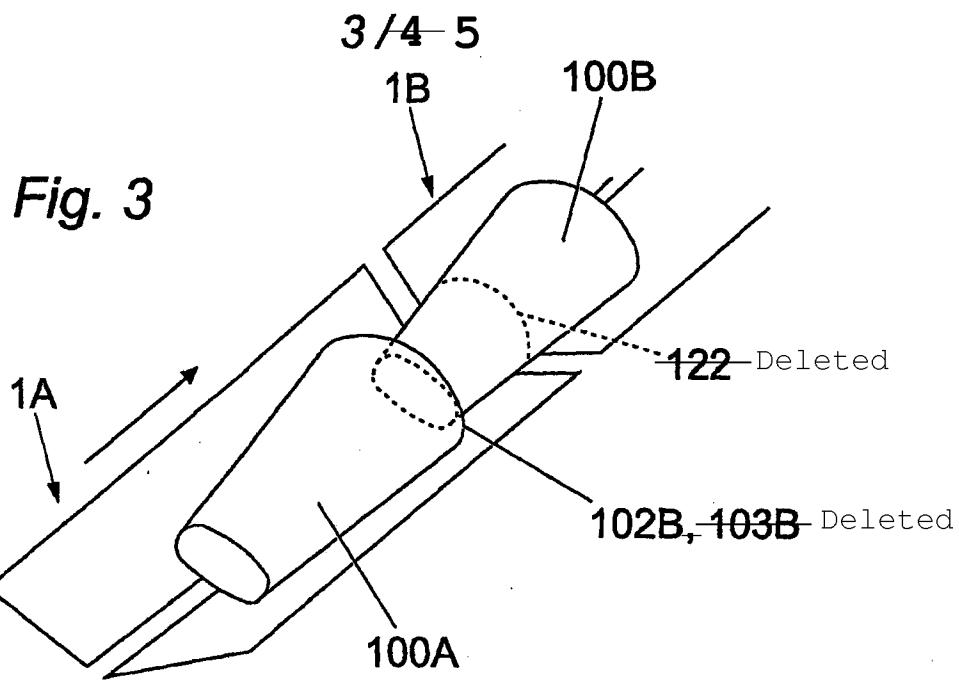


Fig. 4

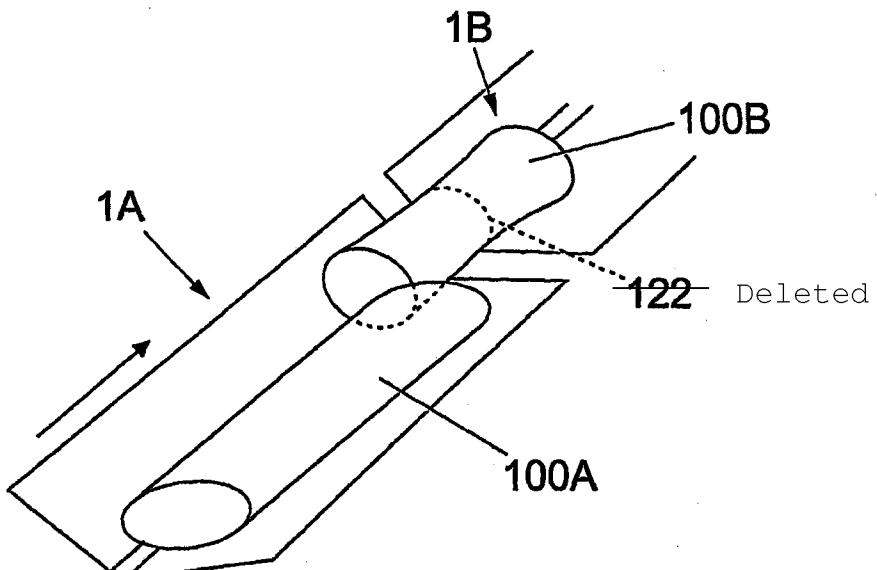


Fig. 5

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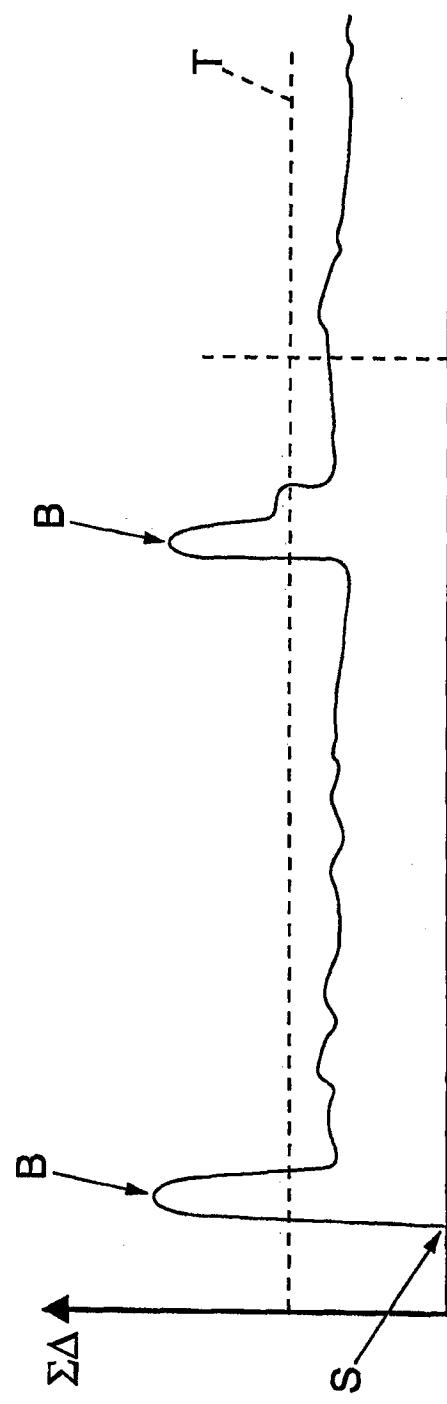
SCANNER  
POSITION DATA

Fig. 6